

## **REMARKS**

The Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of September 11, 2003. The Examiner's recognition of allowable subject matter in claims 4-6, 9, 10, 14-16, 19, 20, 24-26, 29, 30 and 43 is noted with appreciation. Nevertheless, in light of the remarks made herein, reexamination and reconsideration of the application are respectfully requested.

### **The Office Action**

In the Office Action mailed September 11, 2003:

Allowable subject matter was found in claims 4-6, 9, 10, 14-16, 19, 20, 24-26, 29, 30 and 43;

**claims 1, 7, 11, 17, 21, 27 and 33-38** were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Pat. No. 6,397,055 to McHenry et al. ("McHenry");

**claim 39** was rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,933,778 to Buhrmann et al. ("Buhrmann");

**claims 2, 12, and 22** were rejected under 35 U.S.C. §103(a) as being unpatentable over McHenry in view of subject matter the Office Action classified as admitted prior art;

**claims 3, 8, 13, 23 and 28** were rejected under 35 U.S.C. §103(a) as being unpatentable over McHenry, the subject matter classified by the Office Action as admitted prior art and further in view of U.S. Patent No. 6,175,574 to Lewis ("Lewis");

**claims 31 and 33** were rejected under 35 U.S.C. §103(a) as being unpatentable over McHenry in view of U.S. Patent No. 6,219,551 to Hentilä et al. ("Hentilä");

**claims 40-42** were rejected under 35 U.S.C. §103(a) as being unpatentable over Buhrmann in view of Lewis; and

**claims 1, 11 and 21** were rejected under 35 U.S.C. §103(a) as being unpatentable over Buhrmann in view of U.S. Patent No. 5,905,789 to Will ("Will").

### **The Present Application**

By way of brief review, the present application is directed to methods and systems for temporarily, diverting or "tandeming" an incoming call leg to an application node. Such tandeming is utilized to implement various advanced services, especially in mobile or other wireless environments. For example, tandeming can be used to implement --calling party pays-- services, --prepaid-- services, and --one number

services--. For calling party pays services, an application node generates billing and other information for telecommunications services to be billed to the calling party, rather than being billed to the called party. For prepaid services, the subscriber has prepaid for particular types of services, such as having paid in advance for an amount of communication time for wireless communication services. In this case, the application node verifies that the subscriber has made sufficient prepayment to receive the incoming call. For one number services, the application node might, for example, aid in the sequential alerting of various telephones of the subscriber, such as alerting a home telephone, and if unanswered alert a mobile telephone, followed by a paging device. After the application node has performed its particular function, the call is directed back to the switch from whence it came for further call processing (e.g., see page 2, lines 8-11 of the present application).

The various embodiments disclosed in the present application use a new parameter, referred to as a --tandem parameter--, to designate whether an incoming call leg to a particular subscriber is to be tandemmed or diverted to an application node or is to be delivered directly to the subscriber. In some embodiments, a database, such as, a home location register or a visitor location register, stores information such as a subscriber profile. The subscriber profile includes a tandem parameter. A switching center is configured to receive an incoming call leg directed to a called party directory number and to transmit a message to the database to determine call treatment instructions. The call treatment instructions include the tandem parameter. The tandem parameter may indicate whether or not to tandem the incoming call leg and what kind of tandemming is to be performed. If so, a routing parameter and digit analysis are performed and the switching center tandemms or routes the incoming call leg to the appropriate application node based on the routing parameter and digit analysis. A default mode is provided for the incoming call leg should the digit analysis not be performed successfully.

### **The Cited References**

In contrast, the primary reference of the Office Action of McHenry allegedly discloses a system and method for mobile to mobile call delivery or a calling party pays wireless service. Landline facilities are linked to a wireless mobile network. The wireless mobile network is provided with the ability to recognize that a called wireless station is a calling party pays subscriber. For example, in one preferred embodiment, a

range of telephone numbers is predesignated for assignment to calling party pays subscribers (column 6, lines 29-31). It is respectfully submitted that McHenry does not disclose a tandem parameter. Furthermore, McHenry does not disclose obtaining a routing parameter and performing digit analysis when a received tandem parameter indicates tandeming.

Buhrmann allegedly discloses a method and apparatus for providing telecommunication services based on a subscriber profile updated by a profile information manager. A subscriber enters personal information into a Personal Information Manager (PIM) such as a palm or laptop computer. The Personal Information Manager, either automatically or based on additional profile requests entered by the subscriber, generates profile update data associated with the personal information. The personal information manager transmits the profile update data to a database in a telecommunications system which stores subscriber profile data. Upon receipt of the profile update data by the database, the subscriber profile data stored therein is updated in accordance with the subscriber profile update data. Therefore, telecommunication services, including call completion services and message reminder services are provided to the subscriber based on the updated subscriber profile data. The Office Action asserts that Buhrmann teaches a tandem parameter and references call completion data (entries 604, 606, 610) discussed by Buhrmann. However, Buhrmann does not disclose or suggest tandeming. It is respectfully submitted that tandeming is not necessarily required to provide the call forwarding (604, 610) and selective call acceptance (606) call completion services discussed by Buhrmann and disclosure of those services does not disclose or suggest tandeming.

Lewis allegedly discloses a technique for providing an improved signaling network for telephone systems. A technique is provided within each central office in a digital cluster, for translating a destination number for a signaling message into a destination point code. Through the technique of Lewis, an SS7 signaling processing system first translates a destination number into a destination point code. The destination point code is then incorporated into a signaling message. The signaling message is subsequently routed to a destination node that corresponds to the destination point code. The destination point code indicates either a central office within a cluster or an STP outside the cluster. Lewis asserts that use of this technique eliminates the need to translate the destination number into the destination point code without accessing an SS7 node outside of the central office cluster (Abstract).

Hentilä allegedly discloses a method for locating a called subscriber. In a first mode of operation, parallel paging, a service does not know at which number the called subscriber can be reached. A paging message is transmitted substantially simultaneously to all the numbers determined for the subscriber regardless of which network the number is associated with. The call is connected to the number at which the call is first answered. In the second mode of operation, precision paging, the service knows at which number of the plurality of numbers stored in a database the called party can be reached. The paging message is thus transmitted and the call is thus connected to this number only (Abstract).

Will allegedly discloses a call forwarding system using an adaptive model of user behavior. According to Will, subscribers to a personal telephone number service can receive calls placed to telephone numbers associated with an individual rather than a physical location or telephone line. A subscriber predefines a set of telephone numbers for telephones at locations frequented by the subscriber. When a call to a subscriber's personal telephone number is received, a model of the subscriber's behavior predicts the likelihood of the subscriber being at different locations, and the call is forwarded to a telephone at the most likely location, given the current day of the week and time of the day. The model is trained using data obtained by cases in which a caller calling the personal telephone number is successful in locating the subscriber.

The Office Action relies on Will for disclosure that it is well known in the art to tandem a call to an application node if the digit analysis was successful and when digit analysis has not been performed successfully, providing a default mode for the incoming call leg.

However, it is respectfully submitted that Will does not disclose or suggest tandeming. Instead, it is respectfully submitted Will discloses a system wherein a switch or telephone and network server **105** performs all call forwarding operations. Telephone network server **105** includes processor **150** and call forwarding system **160**. --Processor **150** not only performs standard network operations, for example, connecting calls, but it also performs operations for call forwarding system **160**. Such operations include forwarding calls to personal telephone numbers as described below.-  
- (Column 4, lines 30-38). Call forwarding system **160** monitors all incoming calls and determines whether a call is to a subscriber's personal telephone number. All calls not to subscriber's personal telephone numbers are ignored. When determining that a received call is in fact to a specific subscriber's personal telephone number, system **160**

activates a model of the subscriber's behavior. The model is a neural network used to predict the likelihood that a subscriber is at the location corresponding to each of the actual telephone numbers in the database. The likelihood is based on the history of the subscriber's behavior encoded in the model and the current time of day and day of the week when the call to the subscriber's personal telephone number is received. The actual telephone numbers from the database are then ordered in a sequence corresponding to the predicted likelihood that each corresponds to the subscriber's current location on the day and time that the call to his personal telephone number was received. Telephone network server **105** then connects the call to the subscriber's personal telephone to the actual telephone number in the sequence. Since the telephone network server **105** performs the call processing required for the call forwarding service, Will does not disclose or suggest tandeming.

#### **The Claims are not Anticipated**

**Claims 1, 7, 11, 17, 21, 27 and 33-38** were rejected under 35 U.S.C. §102(e) as being anticipated by McHenry. With regard to **claims 1, 11 and 21**, the Office Action asserts that McHenry discloses a method, apparatus and system including receiving a second message containing a tandem parameter. In support of this assertion, the Office Action directs the attention of the Applicants to column 9, line 58-column 10, line 7 of McHenry and characterizes the referenced section as disclosing that a second message indicates to the switch whether AIN processing or normal processing is triggered.

However, McHenry does not disclose or suggest a tandem parameter. Instead, the mere presence of an account record for a subscriber of the mobile carrier in the line identification database **41** of McHenry serves as an indication that a particular subscriber telephone number of the wireless carrier has an associated subscription to a calling party pays service (column 9, lines 63-67). The Office Action appears to be drawing an analogy between the tandem parameter recited in the claims and the indication provided by the mere presence of an account record disclosed in McHenry. However, the mere presence of an account record does not anticipate or suggest a tandem parameter. For example, please see page 12, lines 1-16 of the present application.

For the foregoing reasons, **claims 1, 11, and 21**, as well as the claims that depend therefrom are unanticipated by McHenry.

Additionally, in explaining the rejection of **claims 1, 11 and 21**, the Office Action asserts that McHenry discloses --when the tandem parameter does not indicate tandeming routing the incoming call leg to the called party directory number--. In support of this assertion, the Office Action directs the attention of the Applicants to column 9, lines 58-61 and column 11, lines 52-67.

However, column 9, lines 58-61 simply assert that in normal call processing, a call is routed to an MSC **15** for completion to the destination station **11** without intervention by advanced intelligent network triggering. There is no disclosure or suggestion in the referenced section that an incoming call leg is routed to a called party when a tandem parameter does not indicate tandeming.

Column 11, lines 52-67 explain that in the method of McHenry, when a call is placed at a mobile handset to a mobile telephone number, a determination is made (Step **S3**), preferably at a mobile switching center, of whether the called party is a calling party pays subscriber. If the call is determined to be directed to a mobile station that does not subscribe to a calling party pays service, the call remains in the wireless network system to be processed in conventional fashion (Step **S5**). When the call is answered, the MSC creates the data records necessary to bill the called party airtime charges for the call to the called subscriber. The MSC will complete the call and record the caller's airtime to be billed to the caller. The charge data for both parties are forwarded to the accounting office **17** for bill processing.

The referenced section does not disclose or suggest routing the incoming call to the called party directory number when a tandem parameter does not indicate tandeming. Indeed, at column 14, lines 40-65, McHenry provides two alternative approaches for determining (Step **S3**) whether a dialed called is a calling party pays call. In the first instance, in order to distinguish a CPP from non-CPP call, CPP subscribers are assigned telephone numbers from an allocated range of numbers that are predesignated for the calling party pays purpose. The mobile switching center will identify the number range in its stored database. Any call having a destination number that matches the number range is directed to a tandem trunk. In the second alternative, each calling party pays subscriber number is set in the mobile switching center with an immediate call forwarding status that causes an incoming call to that number to be forwarded by the MSC to the tandem trunk. The tandem, in both of these arrangements, may originate its call processing functions in response to recognition that the trunk from which the call has been received is a dedicated CPP trunk. It is

respectfully submitted that this aspect of McHenry falls within the prior art described in the present application on page 2, lines 4-17 and McHenry simply does not disclose or suggest routing an incoming call leg to the called party when a tandem parameter does not indicate tandeming.

For the foregoing additional reasons, **claims 1, 11 and 21**, as well as the claims that depend therefrom are not anticipated by McHenry.

Furthermore, in explaining the rejection of **claims 1, 11 and 21**, the Office Action asserts that McHenry discloses that when the tandem parameter does not indicate tandeming, obtaining a routing parameter and performing a digit analysis of the called party directory number. In support of this assertion, the Office Action directs the attention of the Applicants to column 11, lines 52-62 and column 12, lines 1-23.

However, as explained above, column 11, lines 52-62 do not disclose or suggest a tandem parameter. Furthermore, McHenry does not disclose or suggest obtaining a routing parameter and performing a digit analysis when a tandem parameter indicates tandeming. Column 12, lines 1-23 make reference (for example at lines 6-8) to the method for alerting a tandem or switch that additional treatment by the tandem is required by identifying the trunk from which the incoming call has been routed. It is respectfully submitted that the referenced section does not disclose or suggest a tandem parameter nor obtaining a routing parameter and performing digit analysis of a called party directory number when a tandem parameter indicates that tandeming is in order.

For the foregoing reasons, **claims 1, 11 and 21**, as well as **claims 2-10, 12-20 and 22-38** which depend respectively therefrom, are unanticipated by McHenry.

Additionally, with regard to **claims 7, 17 and 27**, the Office Action asserts that McHenry discloses a tandem parameter having a first predetermined value to indicate that the incoming call leg is not to be tandemmed to an application node and wherein the tandem parameter has a second predetermined value to indicate that the incoming call leg is to be tandemmed to the application node. As explained above, McHenry does not disclose or suggest the tandem parameter. Arguments similar to those made in support of **claims 1, 11 and 21** are submitted in support of **claims 7, 17 and 27**.

In rejecting **claim 37**, the Office Action asserts that McHenry discloses an application node is a one number telecommunications service and directs the attention of the applicants to column 10, lines 8-25 in support of that assertion.

However, as explained above, for one number services, an application node

participates in the sequentially alerting of various telephones of the subscriber. For example, the application node first directs a switch to alert a home telephone and if the call is unanswered, to alert a mobile telephone followed by a paging device. It is respectfully submitted that McHenry is directed to a calling party pay service and nothing in the referenced portion of column 10, nor any other portion of McHenry, discloses or suggests a one number telecommunication service. For the foregoing additional reason, **claim 37** is unanticipated by McHenry.

**Claim 39** was rejected under 35 U.S.C. §102(e) as being anticipated by Buhrmann. In rejecting **claim 39**, the Office Action asserts that Buhrmann teaches a tandem parameter and directs the attention of the Applicants to a call completion feature active parameter associated with step 708 in FIG. 7 of Buhrmann. However, it is respectfully submitted that voicemail and call forwarding services do not require tandeming and disclosure of a call completion feature active parameter does not disclose or suggest a tandem parameter as disclosed and claimed in the present application. As explained above, as used in the present application, --tandeming-- refers to a process whereby a call leg is diverted by a switch to an application node and is then returned to the switch for further processing (page 2, lines 8-11).

It is respectfully submitted that call forwarding and selective call acceptance do not require call diversion to an application node. Instead, these features can be accomplished within the switch (FIG. 7, column 10, line 50 - column 11, line 28 of Buhrmann. Therefore, Buhrmann does not disclose or suggest tandeming.

For the foregoing reasons, **claim 39** as well as **claims 40-43**, which depend therefrom is unanticipated by Buhrmann.

#### **The Claims are not Obvious**

**Claims 1, 11 and 21** were rejected under 35 U.S.C. §103(a) as being unpatentable over Buhrmann in view of Will. In making this rejection, the Office Action asserts that Buhrmann discloses receiving a second message containing a tandem parameter and directs the attention of the Applicants to column 10, lines 54-67 and column 11, lines 8-10 in support of the assertion.

Column 10, lines 54-67 describe the retrieval of a subscriber profile from a database. However, the call completion data (entries **604, 606, 610**) are call forwarding and selective call acceptance data. They do not disclose or suggest a tandem parameter. Will does not cure this deficiency.



The Office Action goes on to make similar assertions regarding claim elements related to the tandem parameter (e.g., steps D, E and F). Arguments similar to those submitted above are submitted with regard to these claim elements. Additionally, with regard to these claim elements, it is respectfully submitted that Buhrmann does not disclose or suggest obtaining a routing parameter and performing a digital analysis when a tandem parameter indicates tandeming or tandeming a call to an application node when digit analysis has been performed successfully.

Furthermore, the Office Action stipulates that Buhrmann does not teach providing a default mode for the incoming call leg when the digit analysis has not been performed successfully. The Office Action relies on Will to teach, tandeming a call to an application node if digit analysis was successful and providing a default mode for an incoming call when digit analysis has not been performed successfully.

However, as explained above, Will does not disclose or suggest tandeming. All the processing disclosed in Will occurs within the telephone network server 105. Will does not disclose or suggest temporarily diverting or tandeming a call to an application node. Will does not disclose or suggest performing a digit analysis in order to tandem a call nor does Will disclose or suggest that a digit analysis might be performed unsuccessfully.

For the foregoing reasons, **claims 1, 11 and 21** as well as **claims 2-10, 12-20 and 22-38**, which depend respectively therefrom, are unanticipated and are not obvious in light of Buhrmann and Will taken alone or in any combination.

**Claims 2, 12 and 22** were rejected under 35 U.S.C. §103(a) as being unpatentable over McHenry in view of subject matter the Office Action characterizes as admitted prior art. **Claims 2, 12 and 22** depend from **claims 1, 11 and 21** and are unanticipated and are not obvious for at least those reasons.

Additionally, in explaining the rejection of **claims 2, 12 and 22**, the Office Action stipulates that McHenry does not specifically teach transmitting a third message to the database, the third message indicating a tandeming failure. However, the Office Action asserts that since the Applicants stated that in the prior art, if tandeming is unsuccessful, no provision is made for call delivery and that instead, the prior art systems typically provide only a reorder (fast busy) announcement to the calling party, who must then redial the call, that therefore, one skilled in the art would have modified McHenry to provide a third message to the database so that the instructions can be provided to the switch to at least provide the default mode of reorder i.e., fast busy, to

indicate to the calling party to redial the number since the calling party failed to get connected to a destination.

It is respectfully submitted that the rejections of **claims 2, 12 and 22** are based on impermissible hindsight. There is no disclosure or suggestion in McHenry to transmit a third message to a database indicating a tandeming failure. The Office Action asserts that it would be obvious for one skilled in the art to have modified McHenry in order to provide the third message. However, it is respectfully submitted it was not obvious to McHenry. Furthermore, the only motivation to provide the third message indicating a tandeming failure is in the present application.

For the foregoing additional reasons, **claims 2, 12 and 22**, as well as **claims 3-6, 13-16 and 23-26**, which depend therefrom, are unanticipated and are not obvious in light of McHenry and the cited portion of the present application taken alone or in any combination.

**Claims 3, 8, 13, 23 and 28** were rejected under 35 U.S.C. §103(a) as being unpatentable over McHenry in view of subject matter characterized by the Office Action as admitted prior art and further in view of Lewis.

**Claims 3 and 8** depend from **claim 1**. **Claim 13** depends from **claim 11**. **Claims 23 and 28** depend from **claim 21**. **Claims 3, 8, 13, 23 and 28** are patentably distinct and not obvious for at least those reasons.

Additionally, as explained above, McHenry does not disclose or suggest a tandeming parameter. Lewis does not remedy this deficiency. Even if Lewis discloses or suggests single octets or a plurality of octets or SS7 messages, Lewis does not disclose or suggest a tandeming parameter, a tandeming parameter is a predesignated value of a single octet field, a tandeming parameter is a predesignated value of a single octet field within an ANSI compatible calling features indicator parameter or that a tandeming failure is indicated as a predetermined value in an ANSI compatible redirection reason.

For the foregoing reasons, **Claims 3, 8, 13, 23 and 28** are unanticipated and are not obvious in light of McHenry, Lewis and the discussion of the lack of tandeming failure messages in the present application taken alone or in any combination.

**Claims 31 and 32** were rejected under 35 U.S.C. §103(a) as being unpatentable over McHenry in view of Hentilä. **Claims 31 and 32** depend from **claim 21** and are unanticipated and not obvious for at least that reason.

**Claims 40-42** were rejected under 35 U.S.C. §103(a) as being unpatentable over

Buhrmann in view of Lewis. In explaining these rejections, the Office Action asserts that Buhrmann teaches receiving a tandem parameter via SS7 signaling. However, Buhrmann does not disclose or suggest SS7 signaling. Even if Buhrmann does disclose SS7 signaling, Buhrmann does not disclose or suggest a tandem parameter. As explained above, the call forwarding and selective call acceptance activation information is not necessarily related to tandeming and Buhrmann provides no disclosure or suggestion that call forwarding or selective call acceptance use tandeming. Even if Lewis teaches, signaling messages are encoded as a single or plurality of octets. Lewis does not disclose or suggest that a tandem parameter is encoded as a single or plurality of octets or that a tandem parameter is encoded as a field within an ANSI-compatible calling features indicator parameter.

#### **Telephone Interview**

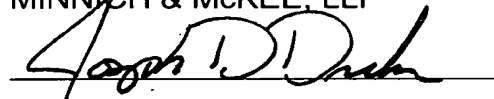
In the interests of advancing this application to issue the Applicant(s) respectfully request that the Examiner telephone the undersigned to discuss the foregoing or any suggestions that the Examiner may have to place the case in condition for allowance.

#### **CONCLUSION**

**Claims 1-43** remain in the application. For the reasons cited above, the application is in condition for allowance. Accordingly, an early indication thereof is respectfully requested.

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